

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing

(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/GB2004/004636

International filing date (day/month/year)
04.11.2004

Priority date (day/month/year)
05.11.2003

International Patent Classification (IPC) or both national classification and IPC
A61L2/20, A61L2/14, A61L2/18

Applicant
STERITROX LIMITED

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**International application No.
PCT/GB2004/004636**IP20 Rec'd PCT/PTO 05 MAY 2006****Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Box No. III Non-establishment of opinion with regard to novelty, inventive step and Industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 13

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 13 are so unclear that no meaningful opinion could be formed (*specify*):

see separate sheet

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the whole application or for said claims Nos.

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

☒ See separate sheet for further details

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2004/004636

Box No. V Reasoned statement under Rule 43b/s.1(a)(I) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	4-11
	No: Claims	1-3, 12, 14
Inventive step (IS)	Yes: Claims	5,6
	No: Claims	1-4, 7-12, 14
Industrial applicability (IA)	Yes: Claims	1-12, 14
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/GB2004/004636

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

10/578605

International application No.

PCT/GB2004/004636

Section V:

AP20RCCGPTC 05 MAY 2006

Reference is made to the following documents:

D1: WO-A-01 78793
D2: EP-A-722 741
D3: WO-A-03 038351
D4: DE-U-200 15 853

1. It is abundantly known to use ozonized water for sterilisation purposes. Furthermore it is a well-known fact that the radical species obtainable by subjecting moist ozone to UV radiation are very potent disinfectants [see e.g. D1 and D2].
 - 1.1 D1 suggests to sterilize the surface of objects using a liquid containing ozone and UV-activated species [page 11, lines 5-15]. The liquid sterilizing agent can be sprayed on the object under otherwise ambient conditions, and the method is particularly suitable for conveyer systems [page 28, lines 1-7]. See also D2 for a similar disclosure.
 - 1.2 Accordingly the subject matter of claims 1-3, 12 and 14 not novel (Art. 33(2) PCT).
 - 1.3 It is also known that various substances such as titanium dioxide catalyse the formation of ozone related sterilants and the breakdown of ozone [vide e.g. D3 page 21, lines 21-26].
 - 1.4 Accordingly the subject matter of claims 4 and 7-9 is considered to lack an inventive step (Art. 33(3) PCT).
 - 1.5 Applying more than one conveyer or making such adjustable cannot be seen to provide any unexpected effect. Such modifications lie well within the capabilities of the skilled Engineer and are considered concern standard optimisations. Accordingly, the subject matter of claims 10 and 11 lacks an inventive step (Art. 33(3) PCT).

- 1.6 The search and examination of the present file has been carried out under the following assumptions:

Claim 2: An ozonised liquid is present in the apparatus. The "supply" is not considered to be a mere ozone generator.

Claims 5 and 6: The catalysing liquid is present in the claimed apparatus.

- 1.7 From the cited document it is not known to provide an apparatus comprising both means for spraying and a source of a liquid catalyst. Although the use of catalysts could itself be considered obvious, it seems nowhere implied or suggested to use a liquid spray of such which appears to allow for specific distribution of the catalyst. Accordingly both novelty and inventive step can be acknowledged for the subject matter of claims 5 and 6 (vide item 1.6 above).

Section VIII:

2. Claim 8 makes reference to claim 8 (Art. 6 PCT).
- 2.1 The use of the apparatus according to the present invention supposedly does not leave any discernable traces on the products treated. Accordingly such products are indistinguishable from objects (sterilised by other means) and the subject matter of claim 14 is consequently prima facie not novel (Art. 33(2) PCT).
- 2.2 Claim 7 appears to be superfluous as it does not introduced any further limitations (Art. 6 PCT).

Section III:

3. The subject matter of claim 13 making reference to the drawings is so broad and indefinite that it cannot be reasonably searched or examined (Art. 6 and R. 6.2(a) PCT).